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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,431	01/06/2004	Robert Baer	0132.67604	3776

7590

07/11/2005

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EXAMINER
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REESE, DAVID C

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/752,431

Applicant(s)

BAER ET AL.

Examiner

David C. Reese

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on RCE: 16 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

This office action is in response to the RCE and Applicant's amendment filed 5/16/2005.

***Status of Claims***

- [1] Claims 1-3, 5-9 are pending.

***Claim Rejections - 35 USC § 103***

- [2] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- [3] Claims 1, 3, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craven, US- 6,666,638, in view of Chen US-6,254,327.

Although the invention is not identically disclosed or described as set forth 35 U.S.C. 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer having ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

As for Claim 1, Craven teaches of a fastener (300 in Fig. 14) for composite material comprising:

a shaft (363, 353),

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an undercut head at a first end of the shaft (170 and below in Fig. 5, and from col. 6, line 6, "...the remnants 80 that are cut or extruded from the remnant-producing material 82 may also be captured by the lower neck portion 174, the upper neck portion 172, and the land area 190").

a point (340) at the other end of the shaft (end of 353),

a first portion of the shaft (353) adjacent the point (340) being threaded (354), and extending over a portion of the total length of the shaft (363,353),

a second portion of the shaft (363) adjacent the head not being threaded, said second portion having a plurality of spaced rings (394), the spaced rings (394) reducing the mushrooming of the composite material when the fastener is used in the composite material (from col. 7, beginning with lines 9, "screw captures the remnants that have been extruded onto the surface of the remnant-product material. In use, remnants 80 that are shaved, cut, or otherwise pushed to the surface 83 of the remnant-producing material 82 are captured by the threads 264 of the upper threaded portion 260. Refer now to Fig. 14 that shows a screw...according to another embodiment of the present invention.")

The difference between the claim and Craven is the claim recites: the threads (354) having three radial lobes. Chen discloses a fastener similar to that of Craven. In addition, Chen further teaches of a shank with a lower portion formed with spiral triangular threads (see figure 4) with three sharp edges and three pointed tips. It would have been obvious to one of ordinary skill in the art, having the disclosures of Craven and Chen before him at the time the invention was made, to modify the first portion of the shaft adjacent the point being threaded of Craven to include three radial lobes, as in Chen. One would have been motivated to make such a combination because such a configuration of thread structure allows for a screw which can be

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easily turned into a material such as a piece of hard wood, as taught by Chen in col. 2, beginning with line 24.

Re: Claim 3, Craven discloses wherein said first portion (353) has asymmetrical threads (thread at 340 compared to the thread at 356 in Fig. 14).

Re: Claim 7, Craven discloses comprising three said rings, wherein said rings are equally spaced with respect to each other (390 and the two rings below in Fig. 14).

[4] Claims 2, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craven, US-6,666,638, in view of Chen US-6,254,327, and further in view of DeHaitre US-5,516,248.

Although the invention is not identically disclosed or described as set forth 35 U.S.C. 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer having ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

As for Claim 2, Craven in view of Chen teaches of that from Claim 1, including a shaft with both a first and second portion.

The difference between the claim and Craven in view of Chen is the claim recites: comprising a knurled portion between said first and second portions. DeHaitre discloses a fastener similar to that of Craven in view of Chen. In addition, DeHaitre further teaches of a knurled section (18) between both a first (16) and second (10) position of a shaft. It would have been obvious to one of ordinary skill in the art, having the disclosures of Craven in view of Chen and DeHaitre before him at the time the invention was made, to modify the fastener of Craven in

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view of Chen to include a knurled section between both the threaded first portion and the second portion as in DeHaitre. One would have been motivated to make such a combination to help reduce installation time and increase the drive tool life since the knurled section, as stated in col. 6, beginning with line 4, "cuts away fibers which would otherwise engage the screw shank and thereby reduce frictional resistance with resulting optimization of driver torque in driving the screw into the workpieces and seating the head beneath the work surface" as taught by DeHaitre.

Re: Claim 9, DeHaitre discloses comprising a shank slot adjacent said point (42 in Fig. 1, motivation of which can be found in col. 5 of DeHaitre, beginning with line 44).

[5] Claims 5-6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Craven, US- 6,666,638, in view of Chen US-6,254,327, and further in view of case law.

Although the invention is not identically disclosed or described as set forth 35 U.S.C. 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer having ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

As for Claim 5, Craven in view of Chen teaches:

It would have been an obvious matter of art recognized equivalence to have the rings unequally spaced with respect to each other, as Applicant has not disclosed that it solves any stated problem of the prior art (that is, the applicant has not discussed how the unequal placement of the spaced rings will solve a different problem than that of equally spaced rings such as that of Craven; as applicant even submits an embodiment that incorporates an version

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where the rings are equally spaced between one another) or is for any particular purpose. It appears that the invention would perform equally well as the invention disclosed by Craven. In addition, it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. See also, *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice). This specific reasoning can also be applied to that stated in Claims 6 and 8.

Re: Claim 6 (see above).

Re: Claim 8 (see above).

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*Conclusion*

[6] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited further to show the state of the art with respect to this particular type of fastener; as well as their extreme relevance to the current application as many read extensively onto the claimed invention: please see submitted notice of reference cited.

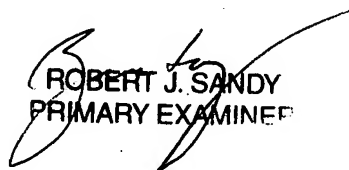
[7] Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Reese whose telephone number is (571) 272-7082. The examiner can normally be reached on 7:30 am-6:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (571) 272-7075. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sincerely,  
David Reese  
Assistant Examiner  
Art Unit 3677

DCR

  
ROBERT J. SANDY  
PRIMARY EXAMINER